REMARKS

The Office rejects claims 1-7 in the subject application. Applicant amends claims 1, 4, and 7. Claims 1-7 (3 independent claims; 7 total claims) remain pending in the application.

Although not included in this Response for brevity, all prior arguments are incorporated herein.

Support for the various amendments may be found in the originally filed specification, claims, and figures. For example, support for the amendments to claims 1, 4, and 7 can be found at page 11, line 33 through page 12, line 29 and Figures 3-5. No new matter has been introduced by these amendments. Reconsideration of this application is respectfully requested.

35 U.S.C. § 102 REJECTIONS

The Office rejects claims 1, 4, and 7 under 35 U.S.C. § 102(e) as allegedly being unpatentable over Johnson[1]. Applicant respectfully traverses the rejection.

Johnson discloses a system for loading data into a cube forest data structure. In Johnson, a method for structuring data with i key attributes (A1, ...Ai) has the following steps:

a) defining a first forest F1 as a single node labeled A1;
b) constructing a subsequent forest Fn as follows:
    i) creating a node n;
    ii) copying a previous forest Fi-1;
    iii) making each tree in the previous forest Fi-1 a subtree of the node n;
    iv) creating another copy of the previous forest Fi-1; and
    v) defining the subsequent forest Fi as a union of the previous forest Fi-1 and a tree rooted at the node n; and
c) repeating step b) i-1 times until Fi is constructed, where Fi is a data structure.

Johnson indicates that the paths in Fi represent keys of identifying data records. A next tree in the order includes a root template node with branches to duplicates of each of the previous trees. A total number of the template nodes is equal to 2^n-1 (2^{n-1} of which are leaf nodes).[2]

But Johnson fails to teach, advise, or suggest "if it is determined that the node corresponding to the key parameter already exists, then a new node corresponding to the key parameter is not added, and at least one node corresponding to a parameter which is not the key parameter is added to the hierarchical tree" as recited in claims 1, 4, and 7.

[1] U.S. Patent No. 6,334,125, issued December 25, 2001.
[2] Johnson, column 2, lines 43 to column 3, line 1.

In Johnson, F_1 consists of a single node n labeled A_1. To construct F_1, a node labeled A_1 is created. Then, a copy of F_1 is created (i.e., a copy of A_1 is created, because F_1 consists of a single node n labeled A_1). As such, "if it is determined that the node corresponding to the key parameter already exists", then Johnson teaches away from "a new node corresponding to the key parameter is not added", because Johnson specifically creates (or adds) a copy of F_1 (i.e., a copy of A_1 is created, because F_1 consists of a single node n labeled A_1).

Johnson also fails to teach, advise, or suggest "if it is determined that the node corresponding to the key parameter does not exist, then a new node corresponding to the key parameter and at least one node corresponding to a parameter which is not the key parameter are added to the hierarchical tree" as recited in claims 1, 4, and 7.

In Johnson, a well-formed cube forest is constructed in which any point query can be answered by searching for a single node. In other words, the structure should be compatible with every point query.[3] As such, Johnson cannot construct the structure "if it is determined that the node corresponding to the key parameter does not exist", because the structure should be compatible with every point query.

Thus, Johnson fails to teach, advise, or suggest one or more of the missing claimed elements, so that claims 1, 4, and 7 are patentable over Johnson.

35 U.S.C. § 103 REJECTIONS

Johnson in view of Bader

The Office rejects claims 2 and 5 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johnson in view of Bader.[4] Applicant respectfully further traverses the rejection.

Based on the above arguments in connection with claims 1 and 4 and the Johnson reference, claims 2 and 5 (which variously depend from claims 1 and 4) are patentable for the same reasons over Johnson in view of Bader.

In addition, Applicant refers to the prior arguments made in connection with the Bader reference.

Thus, Johnson in view of Bader fails to teach, advise, or suggest one or more of the missing claimed elements, so that claims 2 and 5 are patentable over Johnson in view of Bader.

[3] Johnson, column 13, lines 33-37.

Johnson in view of Morgenstern

The Office rejects claims 3 and 6 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johnson in view of Morgenstern.[5] Applicant respectfully further traverses the rejection.

Based on the above arguments in connection with claims 1 and 4 and the Johnson reference, claims 3 and 6 (which variously depend from claims 1 and 4) are patentable for the same reasons over Johnson in view of Morgenstern.

In addition, Applicant refers to the prior arguments made in connection with the Morgenstern reference.

Thus, Johnson in view of Morgenstern fails to teach, advise, or suggest one or more of the missing claimed elements, so that claims 3 and 6 are patentable over Johnson in view of Morgenstern.

CONCLUSION

Thus, the Applicant respectfully submits that the present application is in condition for allowance. Reconsideration of the application is thus requested. Applicant invites the Office to telephone the undersigned if he or she has any questions whatsoever regarding this Response or the present application in general.

Respectfully submitted,

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[4] U.S. Patent No. 5,467,471, issued November 14, 1995.
[5] U.S. Patent No. 5,970,490, issued October 19, 1999.